



Elite control of HIV infection: implications for vaccines

Citation

Pereyra, Florencia, Marylyn M. Addo, Daniel E. Kaufmann, Toshiyuki Miura, Almas Rathod, Brett Baker, Alicja Trocha, et al. 2006. Elite control of HIV infection: implications for vaccines. *Retrovirology* 3(Suppl 1): S16.

Published Version

doi:10.1186/1742-4690-3-S1-S16

Permanent link

<http://nrs.harvard.edu/urn-3:HUL.InstRepos:4874504>

Terms of Use

This article was downloaded from Harvard University's DASH repository, and is made available under the terms and conditions applicable to Other Posted Material, as set forth at <http://nrs.harvard.edu/urn-3:HUL.InstRepos:dash.current.terms-of-use#LAA>

Share Your Story

The Harvard community has made this article openly available.
Please share how this access benefits you. [Submit a story](#).

[Accessibility](#)

Oral presentation

Open Access

Elite control of HIV infection: implications for vaccines

Florencia Pereyra^{1,2}, Marylyn M Addo¹, Daniel E Kaufmann¹, Toshiyuki Miura¹, Almas Rathod¹, Brett Baker¹, Alicja Trocha^{1,3}, Peggy Ueda¹, Rachel Rosenberg¹, Daniel Cohen⁴, David Stone⁵, Yang Liu⁶, Terri Wrin⁶, Susan Buchbinder⁷, Christos J Petropoulos⁶, Eric Rosenberg¹ and Bruce D Walker^{*1,2,3}

Address: ¹Partners AIDS Research Center, Massachusetts General Hospital and Division of AIDS, Harvard Medical School, Boston, Massachusetts 02129, USA, ²Brigham and Women's Hospital, Division of Infectious Diseases, Boston, Massachusetts 02115, USA, ³Howard Hughes Medical Institute, Chevy Chase, Maryland 20815, USA, ⁴Fenway Community Health Care Center, Boston, Massachusetts 02115, USA, ⁵Lemuel Shattuck Hospital, Boston, Massachusetts 02130, USA, ⁶Monogram Biosciences, Inc., San Francisco, California 94080, USA and ⁷San Francisco Department of Public Health, San Francisco, California 94102, USA

* Corresponding author

from 2006 International Meeting of The Institute of Human Virology
Baltimore, USA. 17–21 November, 2006

Published: 21 December 2006

Retrovirology 2006, **3**(Suppl 1):S16 doi:10.1186/1742-4690-3-S1-S16

© 2006 Pereyra et al; licensee BioMed Central Ltd.

Although development of an effective AIDS vaccine to provide sterilizing immunity remains an elusive goal, vaccine protection from disease progression has been achieved in animal models, supporting this approach as a realistic goal for first generation vaccines for humans. The global epidemic would be expected to contract as long as viral load could be durably sustained at levels below 2000 RNA copies/ml, a level at which the probability of transmission and of disease progression are markedly reduced. Such control occurs in a subset of infected persons, but the immune responses in these persons have not been systematically defined. Here we examine HIV-specific cellular and humoral immune function in persons who have achieved such viral control without the need for medications, including those who maintain plasma virus below the level of detection (< 50–75 copies/ml, aviremic controllers, n = 64), persons with persistent low level viremia (75–2000 copies, viremic controllers, n = 60) and persons with chronic uncontrolled infection (n = 30). Results to be presented indicate substantial individual heterogeneity in adaptive immune responses among HIV controllers, and none of the parameters tested predicts the ability to contain virus. These results have important implications

for current HIV vaccine development strategies aimed at durable maintenance of low level viremia.